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Pathways to Inclusion? Labor Market Entry Trajectories of Persons With Disabilities in Europe

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Abstract

Almost a fifth of the population in OECD countries report having a disability and the proportion of students classified as having special educational needs (SEN) has steadily increased over recent decades. While this group faces marginalization in schooling and employment everywhere, there are profound differences in disability-based disadvantages across countries. However, comparative research on the labor market opportunities of persons with disabilities (PwDs) remains limited, especially regarding school-to-work transitions (STWT) that are crucial for subsequent labor market opportunities. Thus, lacking comparative knowledge on how institutional contexts shape these transitions also limits opportunities for policy learning and improvement of supports provided. This study addresses these gaps by analysing longitudinal data from the European Statistics on Income and Living Conditions (EU-SILC). First, using sequence and cluster analysis, we classify these trajectories and provide an in-depth analysis of labor market entry patterns for PwDs compared to those without disabilities across 31 European countries. Second, we explore whether the timing of first employment, instability during the STWT, as well as inclusionary or exclusionary transitions vary between these groups and how the disparities between persons with and without disabilities regarding these indicators are related to institutionalized segregation and support structures. Our findings highlight that PwDs usually do not transition more slowly to (some form of) employment, yet they experience more instability and less inclusion during their STWT. Segregation exacerbates disadvantages, whereas institutional support structures reduce the disadvantages youth with disabilities face when these programs actively facilitate pathways to inclusion.

Keywords
disability; Europe; European comparisons; inclusion; labor market; pathways; school-to-work transition; segregation; sequence analysis; support

1. Introduction

Labor market participation is essential for economic subsistence as it is for meaningful participation in society. The school-to-work transition (STWT) is a crucial phase for successful integration into the labor market (Bynner & Parsons, 2002). In OECD countries, about 18% of the population reports having a disability, with prevalence continuously rising since 2005 (OECD, 2022b, p. 33). The proportion of students with disabilities ("special educational needs" or SEN) in schooling has also been rising globally (Richardson & Powell, 2011). By ratifying the UN Convention on the Rights of Persons with Disabilities (United Nations, 2006), 192 countries have now committed to ensuring equalized access to schooling, vocational education, training, and work. However, research shows that persons with disabilities (PwDs) continue to face significant barriers to entering vocational education and training (VET), post-secondary education, and the labor market (Janus, 2009; Newman et al., 2011; Wells et al., 2003). Still, labor market opportunities for PwDs vary widely across countries (OECD, 2022b), suggesting similar trends for STWT. Despite this, comparative knowledge on STWT of PwDs is scarce and mostly descriptive regarding current labor market status (OECD, 2022b, p. 37). Thus we ask: How do STWT processes differ across European countries for PwDs and persons without disabilities (PwoDs)? Analysing STWT processes and categorizing labor market entry trajectories (Brzinsky-Fay, 2007; McVicar & Anyadike-Danes, 2002) is vital for policy learning and understanding life course trajectories—a key concept in life course theory (Sackmann & Wingens, 2003).

From inequality, educational and social policy perspectives, examining how STWT pathways and processes for PwDs are shaped by institutions is crucial. Differences in institutional environments have been shown to explain varying STWT across countries (Breen & Buchmann, 2002; Buchmann & Kriesi, 2011). However, theories on institutional influences on STWT (e.g., Allmendinger, 1989; Müller & Shavit, 1998) have not explicitly considered PwDs. Hence, many existing institutional explanations cannot fully explain STWT for this particularly disadvantaged group (Blanck et al., 2024). Research on disability policy often addresses general labor market participation (e.g., van der Zwan & de Beer, 2021). Given the dynamic nature of disablement and the importance of phase-specific institutions at the intersection of education and employment, complementary theoretical frameworks are needed to understand how institutions affect STWT for PwDs. The "labelling-resource dilemma" (see Powell, 2016), analogous to the distributive dilemma in social policy generally (Stone, 1984), is relevant for understanding the educational and labor market chances of PwDs, as it emphasizes tensions between providing additional resources to compensate for disadvantages and the risk of segregation and exclusion when resources are provided in segregated settings, such as special schools or sheltered workshops (Malo & Rodríguez, 2022; Menze et al., 2023; Myklebust & Båtevik, 2009; OECD, 2010, p. 80; Rojewski et al., 2015). Support structures often facilitate pathways to inclusion. However, such relevant institutions usually are related closely to other institutions that may not. These factors and tensions are represented by the classifications of transition regimes (Walther, 2006) and analyses of the influence of institutional configurations (Brzinsky-Fay, 2017), requiring analyses to account for these correlations. This raises the question of whether specific country clusters can be identified based

on indicators related to support structures and segregation of PwDs and how they relate to disadvantages in labor market entry trajectories for PwDs compared to PwoDs.

We address these questions by building upon research literatures on STWT, social stratification, and disability policy, and leveraging longitudinal data from the European Statistics on Income and Living Conditions (EU-SILC). First, we provide in-depth analyses of labor market entry trajectories of PwDs in 31 European countries and compare these to those of PwoDs. Applying sequence and cluster analysis, we classify labor market entry trajectories based on speed to employment, instability, and inclusivity/exclusivity. Second, via cluster analysis, we identify four country clusters based on indicators for support structures and segregation provided by the OECD (2025) and the European Agency for Special Needs and Inclusive Education (EASNIE, 2014, 2016, 2018). Third, we analyse how these clusters relate to differences between PwDs and PwoDs regarding speed to first employment, instability, and inclusionary/exclusionary transitions. Following recent international studies (e.g., Hadjar & Kotitschke, 2022; Kangas & Karonen, 2022; OECD, 2022b), we define disability based on subjective evaluations of individual "limitations in activities because of health issues." This approach acknowledges the interaction between impairments and environmental barriers, as in the International Classification of Functioning, Disability and Health (ICF; WHO, 2001). Given limited comparative knowledge on STWT for PwDs, our approach is primarily exploratory, laying the foundation for further comparative research.

2. Previous Research on Disability and Labor Market Entry Trajectories in European Countries

2.1. Labor Market Entry Trajectories of PwDs and PwoDs

Sociodemographic characteristics clearly impact STWT (Iannelli & Smyth, 2008) as do educational credentials: Persons with higher formal qualifications enter the labor market at higher rates (Wolbers, 2007) and have lower risks of unemployment or employment in unskilled jobs (Gangl, 2003). Moreover, low-skilled workers are more likely to experience non-standard employment such as part-time work and self-employment (Schmid, 2017, p. 3). Studies from single countries show that PwDs are also disadvantaged in their STWT: They enter post-secondary education, vocational training, and employment less frequently, with a higher risk of being "not in education, employment or training" (NEET; e.g., Blanck, 2020; Gutman & Schoon, 2018; Menze et al., 2023; Newman et al., 2011).

Yet, researchers have usually analysed STWT solely as single events, e.g., the chances of entering a certain type of employment at a certain age (Buchmann & Kriesi, 2011). This is also true for research on STWT of PwDs. Rare comparative research on STWT of PwDs is mostly descriptive, based on aggregate, cross-sectional data on current labor market status (e.g., NEET prevalence per year; see OECD, 2022b, p. 37). However, to better understand STWT, it is necessary to additionally analyse processes, in particular sequences of labor market entry trajectories. Sequences provide conceptual links between single transitions and trajectories, understood as "any life-course movement that includes at least two transitions between states (in a given state space)" (Sackmann & Wingens, 2003, p. 96). Theoretically, Sackmann and Wingens (2003) distinguish six different types of STWT sequences based on the number and order of different states (Table 1). The sequence type "rupture" consists of only one transition from school to an absorbing state such as work or unemployment. "Interruption" means that a status is interrupted by one other status, in this case, education is continued

Table 1. School-to-work transition types.

Sequence type		School-to-work sequences
Rupture	A → B	School → Work
Interruption	A → B → A	School → Work → School
Change	A → B → C	School → Work → Non-Employment
Bridge	A → AB → B	School → Apprenticeship (= School + Work) → Work
Return	A → AB → A	School → Apprenticeship (= School + Work) → School
Fusion	A → B → AB	School → Work → Further Education (= School + Work)

Source: Authors' representation based on Sackmann and Wingens (2003, p. 102).

after a period of work. "Change" entails three different statuses. The three other transition types—"bridge," "return," and "fusion"—include combined statuses like apprenticeships and further education, which either link two statuses or are the result of two other statuses.

Empirically, four main types of labor market entry trajectories have been identified across studies (with varying frequency in different countries), despite analyses being based on diverse sets of countries (Brzinsky-Fay, 2007; Lorentzen et al., 2019; Quintini & Manfredi, 2009; Scherer, 2001): An important transition type is characterized by states of education (of varying length), followed by those of work (a); other commonly identified types constitute a type marked by long periods of unemployment or inactivity (early) in the STWT (b), return to education after phases of employment or inactivity (c), and a type characterized by instability that comprises several changes between different statuses (d).

Unsurprisingly, the quantitative relevance of types of labor market (entry) trajectories also varies between sociodemographic groups generally and between PwDs and PwoDs specifically (Ballo & Alecu, 2023; Brzinsky-Fay, 2007, 2015; Brzinsky-Fay & Solga, 2016; Scherer, 2005). In a longitudinal study on Norway, Ballo and Alecu (2023) identify four different types of labor market trajectories of persons aged 20 to 34: "permanently work-disabled," "stable employment," which is education followed by work, "early marginalization," with status changes resulting in work-disability, and "unstable employment" with several changes between different status. PwDs had lower probabilities of being in the "stable employment" cluster than PwoDs. A study on Britain showed that over a five-year period, PwDs (aged 15 and above) were more likely to reduce working time or exit the labor market completely (Rigg, 2005). So far, few studies have fully addressed questions related to labor market entry trajectories of PwDs. These show that during the first four years of their STWT, PwDs in many countries spend more time NEET and less time in employment (Blanck et al., 2024) and that PwDs in Germany experience delayed STWT (Reims & Schels, 2022). Negative effects of disability on labor market outcomes also seem to last for a long time after students leave school (Myklebust & Båtevik, 2022; Newman et al., 2011). Examining STWT status distributions over time reveals that many youths with disabilities, like their non-disabled peers, successfully transition from education to employment (Blanck et al., 2024). To date, no study has analysed labor market entry trajectories of PwDs across most European countries and compared them to those of PwoDs.

2.2. Institutional Influences on Labor Market Entry Trajectories of PwDs in European Countries

Country differences have long been a particular focus of STWT research, showing cross-country variation in length, timing, and outcomes (Marczuk, 2024). Although comparative and longitudinal research on STWT of youth with disabilities is still rare, existing cross-sectional studies show that gaps in NEET rates between PwDs and PwoDs vary substantially across Europe (Halvorsen et al., 2016; OECD, 2022b) as well as the impact of health across regions, such as Continental, Eastern, and Southern Europe (Rocca et al., 2022). A descriptive study based on EU-SILC shows that the cumulative length of NEET and employment spells and the respective gaps between PwDs and PwoDs vary highly between countries (Blanck et al., 2024). Theoretical and empirical accounts of the international diversity in STWT have emphasized several institutional features of schooling and labor markets as well as their linkages (Allmendinger, 1989; Bol & van de Werfhorst, 2013; Breen & Buchmann, 2002; Maurice et al., 1986). Also, specific clusters of institutions—"transition regimes"—have been identified that shape labor market entry trajectories (Brzinsky-Fay, 2017; Gangl, 2001; Walther, 2006). However, thus far, institutional explanations for differing STWT have been developed without explicitly considering PwDs. Research on disability policy makes clear that general country classifications differ from clusters of institutional features relevant to PwDs (on welfare states and disability policy see Lee, 2014; Tschanz & Staub, 2017). The varying relevance of interrelated institutions and countries' institutional logics (Tschanz & Powell, 2020) likely explains why established institutional explanations have limited explanatory power for the significant diversity in the STWT of PwDs even within transition regimes (Blanck et al., 2024). Thus, additional and complementary theoretical approaches are needed to better understand country differences in STWT and labor market entry trajectories for PwDs.

3. Theoretical Approach

3.1. Signaling, Stigma, and Discrimination

Theoretically, differences in labor market opportunities have been explained based on assumptions about processes of labor market signaling. Building upon human capital theory (Becker, 1975), the signaling approach assumes that employers use so-called screening devices, like educational certificates, to select the most capable and productive workers (Stiglitz, 1975). However, in this perspective, employers not only use such direct signals for productivity but also a person's background characteristics to assess trainability and subsequent training costs (Thurow, 1975). Additionally, lower employment opportunities for disadvantaged groups have been explained based on processes of stigmatization and discrimination. Stigma can be understood as the negative social reaction to certain characteristics, based on culturally shaped beliefs about ab/normality, as well as the internalization of the negative stereotypes by those affected by them (Link & Phelan, 2001), which may lead to self-selection during STWT and higher probabilities of exclusionary labor market entry trajectories (Pfahl, 2011). Discrimination in this context can be understood as (institutionalized) biased treatment based on individual and culturally shared stereotypes, which may result in exclusion (Phelps, 1972; Rivera & Tilcsik, 2023). PwDs are particularly at risk concerning signaling, stigma, and discrimination. First, due to environmental (physical and attitudinal) barriers, as well as prevalent and persistent segregation in education systems (e.g., Mazzotti et al., 2021; Myklebust & Båtevik, 2009), PwDs are disproportionately represented in the group of those with low formal qualification (OECD, 2022b). Second, disability as such is not only perceived as a strong signal for low productivity and low trainability but, due to stigma, it is also perceived as a marker of membership in an undesirable group (Østerud, 2023). Based

on these assumptions, employers may then discriminate against PwDs by placing them at the end of the labor queue—or excluding them entirely (Thurow, 1975), thereby creating barriers to entering the labor market and making longer search processes necessary, which may result in higher risks of labor market entry trajectories marked by instability or even exclusion. Accordingly, studies from single countries have shown that PwDs—as compared to those without disabilities—are disadvantaged in their access to the labor market and more likely to be excluded (Berre, 2024; Bjørnshagen & Ugreninov, 2021; OECD, 2022b).

Based on these theoretical ideas and previous research, we hypothesize that:

H1: PwDs will have slower transitions to employment compared to PwoDs.

H2: PwDs will more frequently experience exclusionary and unstable labor market entry trajectories.

H3: PwDs will less frequently experience inclusionary labor market entry trajectories.

3.2. Support Structures and Segregation

Although comparative data is limited, transition systems for youth with disabilities clearly vary between countries, and these shape their labor market entry trajectories (EADSNE, 2002). For example, Tschanz and Powell (2020) show that Switzerland provides more support for students with SEN in STWT (through its VET system) than does the United States. A useful theoretical perspective for understanding country differences in institutional environments affecting STWT and labor market entry trajectories of youth with disabilities—particularly through signaling, stigma, and discrimination—is the "resource-labelling dilemma" (see Powell, 2016), akin to the broader distributive dilemma in social policy (Stone, 1984). In welfare states, disability presents a fundamental distributional challenge. Welfare state organizations aim to provide people in need with necessary (additional, specialized) resources. However, since resources are scarce; only the deserving are supposed to receive them. Benefits are granted only after a means test, based on historically developed categories that determine "legitimate" and "deserving" needs. The designation "disabled" is tied to access to support structures during the STWT, which can vary widely (Coñoman et al., 2024). Each approach engages distinct mechanisms to improve labor market outcomes for disadvantaged or disabled youth, targeting systemic barriers to enhance employment opportunities (Holtmann et al., 2020). A widespread measure for supporting successful STWT of PwDs is transition planning and support that focuses on labor market matching by providing information on the transition process and available placement options as well as on improving agency by helping youth to develop "appropriate aspirations" (Yates & Roulstone, 2013), possibly counterbalancing self-selection out of the labor market based on experiences of stigma (Pfahl, 2011). Accordingly, transition planning has been shown to be valuable for improving transitions into postsecondary education or the labor market and thereby being more inclusive (Cobb & Alwell, 2009). Another important aspect of disability policy are transfers (financial and in kind) that may be used to reduce environmental barriers to participation or provide investment in human capital. Both may lower perceived training costs. Empirically, a higher share of disability benefits has been shown to be beneficial to the employment of PwDs (van der Zwan & de Beer, 2021).

However, because of the distributive dilemma, receiving support can also lead to restrictions on other rights. Empirically, we find that the benefits and additional resources are often provided in segregated

environments, such as special classes and special schools, that have been shown to hinder successful transitions from school to vocational training, postsecondary education, and the labor market. They are associated with reduced possibilities for acquiring educational credentials, high risks of stigma and associated self-selection out of the labor force as well as discrimination by potential employers due to institutional labelling (Blanck, 2020; Mazzotti et al., 2021; Menze et al., 2023; Powell & Pfahl, 2019). Yet, in a recent multi-country study, a negative bivariate association between the size of a special school system in a country, NEET length, and the length of employment during the STWT of PwDs, has been shown (Blanck et al., 2024). This counterintuitive finding has been interpreted as a possible association of special school systems with extensive segregated (pre-)vocational rehabilitation measures—educational programs located at the nexus of the school system and the labor market, such as vocational preparation specifically for youth with disabilities (Reims & Schels, 2022, p. 5836). Such programs divert young PwDs away from the regular labor market, because not only employers but also professionals, who engage with youth during the STWT, discriminate against them, channeling them directly into these suboptimal segments, thus hindering their participation in the regular labor market (Powell & Blanck, 2023).

Work in sheltered workshops for PwDs, a particularly strong kind of labor market segregation, has been shown to lead to exclusionary labor market entry trajectories outside of the regular labor market and to continued employment in such settings (Czedik et al., 2021; Malo & Rodríguez, 2022; OECD, 2010, p. 80; Reims & Schels, 2022). Simultaneously, these segments potentially prevent unstable or exclusionary labor market entry trajectories (Solga et al., 2014). While the empirical value of this interpretation still needs to be assessed, it points, first, to the importance of considering segregation not only in schooling, but also in the labor market to better understand the complex labor market entry trajectories of PwDs. Second, institutional influences can hardly be reduced to a single institution but that the linkages and interrelatedness of different institutions shape labor market entry trajectories (Allmendinger, 1989; Bol & van de Werfhorst, 2013; Breen & Buchmann, 2002; Brzinsky-Fay, 2017; Maurice et al., 1986; Walther, 2006). The lack of interinstitutional coordination for STWT of PwDs is particularly problematic (Tschanz & Powell, 2020). Therefore, specific configurations of support structures and segregation should be analysed to better understand how institutions are associated with disability-specific disadvantages in labor market entry trajectories and learn about their differential potentials for providing pathways to inclusion.

4. Data and Methods

4.1. Data and Variables

We use longitudinal microdata for 31 countries across Europe from EU-SILC, which involves rotating panels for individuals starting at the ages 16 to 18 and following them over four years between 2003 and 2020. We selected young persons with non-missing information for the whole 4-year period who left education at least once, resulting in a sample of 13,634 persons (see Supplementary File 1, Tables A1a and A3).

4.1.1. Labor Market Status

EU-SILC provides monthly calendar information on current (labor market) activity status. We distinguish education and full-time, part-time, and self-employment. To capture (temporary) withdrawal from the labor market, the statuses NEET (complete inactivity), care work, and work disabled (total withdrawal from the labor market) were included.

4.1.2. Disability

The main independent variable is disability. Comparative studies of disability are challenging because the formal classification of disability status depends on cultural norms as well as the provision of disability benefits, which leads to differing group compositions. Moreover, STWT imply transitions from school-based (SEN) to labor market definitions of disability (e.g., "work-disabled"; Tschanz & Powell, 2020). To our knowledge, EU-SILC is the only internationally comparative data set that enables analysis of labor market entry trajectories of PwDs. Following recent comparative studies on disability (e.g., Hadjar & Kotitschke, 2022; Kangas & Karonen, 2022; OECD, 2022b), a subjective definition of disability covered in EU-SILC is employed. Respondents were asked whether they experienced limitations in their activities because of health problems with answers ranging from *yes, strongly limited* to *yes, limited* to *no, not limited at all*. An individual was assigned 0 for *no disability* if no limitation was reported and 1 for *disability* if a limitation or a strong limitation was reported during the four surveyed years. This relates to the ICF, which defines disability as a limitation in activities arising from a complex relationship between "health conditions and contextual factors" (WHO, 2001). Nevertheless, this definition has limitations: In a Norwegian study, Molden and Tøssebro (2012) showed that compared to other measures of disability, subjective definitions include more people with chronic pain and mobility difficulties and fewer people with mental and learning/cognitive difficulties, who are particularly disadvantaged in accessing the labor market. Moreover, subjective definitions include more persons who participate in the labor market than those covered by administrative classifications. Also, such a measure of disability introduces variability across countries because respondents classify their limitations according to their socialization, system provisions, and local conditions. However, the latter seems to be less problematic if—as it is implemented here—PwoDs are the comparison group and not PwDs in other countries.

4.1.3. Support Structures

Indicators covering comparative information on institutions relevant to the STWT of PwDs are scarce. We rely on three indicators for support structures from the OECD on public expenditure in a share of the GDP (Supplementary File 1, Tables A1c and A2):

1. Placement and related services, including:

   Open information services, referral to opportunities for work, training and other forms of assistance, counselling and case management of jobseekers, financial assistance with the costs of job search or mobility to take up work, and job brokerage and related services for employers, if spending on these functions can be separately identified. Services provided by the main public employment service and by other publicly-financed bodies are included. (OECD, 2022a)

2. Special support for apprenticeship, including "programs providing incentives to employers to recruit apprentices from labor market policy target groups, or training allowances for particular disadvantaged groups" (OECD, 2022a).
3. Public spending on incapacity, referring to government spending on a country's programs relating to sickness, disability, or occupational injury in kind and financial transfers (OECD, 2024).

In addition, the OECD provides an indicator on "sheltered and supported employment," however, this indicator mixes two very different policy instruments and it is unclear what kind of sheltered employment it actually represents (OECD, 2022a). Therefore, it was not used in the analyses.

4.1.4. Segregation

To capture segregation, we use: (a) information on the national share of primary and secondary students educated in special schools in the years 2012, 2014, and 2016 (EASNIE, 2014, 2016, 2018), and (b) the extent of specific programs for youth with disabilities in a country, measured via an OECD indicator on "vocational rehabilitation": "Rehabilitation refers to vocational rehabilitation for persons with a reduced working capacity which prepares them to move on to work or regular training" (OECD, 2022a; Supplementary File 1, Tables A1c and A2).

4.2. Analytical Strategy

The first question our research poses is: How do STWT processes differ across European countries for PwDs and PwoDs? The first step in our analysis is therefore to analyse which types of labor market entry trajectories can be found generally across our sample. Sequence analysis has been tested and found as an appropriate method for studying labor market entry trajectories (Brzinsky-Fay, 2014; Scherer, 2001, 2005). As an exploratory method, it "enables us to define 'life as an unfolding process' as the research focus, in contrast to limiting our attention to a specific outcome variable" (Aisenbrey & Fasang, 2017, p. 1452). Using optimal matching to compare sequences and cluster analysis for grouping them allows us to identify types of labor market entry trajectories (sequence clusters) and describe them with respect to the length, order, and number of sequences (Brzinsky-Fay, 2007). Optimal matching and cluster analysis usually result in a couple of hierarchically ordered cluster solutions. The selection of the most appropriate cluster solution is a qualitative decision by the researchers. To select the most appropriate cluster solution, we looked at all solutions from 2 to 20 clusters and qualitatively assessed the additional insights compared to other solutions. We finally decided on a 7-cluster solution, because this shows trajectory types of very different kinds without too many repetitive or similar clusters. The revealed sequence clusters should be understood as ideal types, meaning that each of the clusters contains similar sequences, whereas the difference between clusters is maximized (Brzinsky-Fay, 2007). In the second step, we checked for deviations from the average share of PwDs in the clusters. In a third step, we tested H1 through H3. To this end, additional sequence indicators were constructed that allowed us to assess the properties of the labor market entry trajectories addressed in the hypotheses (see also Ritschard, 2023; see also Supplementary File 1, Table A1b):

1. The speed to first employment is measured by the number of months a person needs to enter full-time, part-time, or self-employment after leaving education. Since the observation period for each individual is four years, this indicator ranges from 1 to 48.
2. Instability is assessed based on an indicator measuring sequence turbulence. It counts the number of different statuses and episodes (status changes) within an individual process. Both are normalized and added, which results in an indicator with a range from 0 (*no turbulence*) to 1 (*maximum turbulence*).
3. To determine inclusionary and exclusionary transitions, we classified all status changes as inclusionary, exclusionary, or maintenance transitions. Exclusionary labor market entry trajectories were measured based on an indicator capturing how many of the overall transitions reported by an individual were

made from employment to either NEET, care work, or being work disabled. Inclusionary labor market entry trajectories were measured based on an indicator capturing how many of the overall transitions reported by an individual were made from NEET, education, care work, or being work disabled to states of employment. Maintenance transitions are status changes that do not imply enhancements or deteriorations. For each individual, the shares of inclusionary, exclusionary, and maintenance transitions with respect to all transitions of this individual are calculated, summing up to 100% (Supplementary File 1, Tables A1b and A4).

To test H1 through H3, *t*-tests were calculated comparing PwDs and PwoDs for each indicator.

The second question addresses whether specific country clusters can be identified regarding support structures and segregation of PwDs. Because we assume that the institutional indicators within countries are interrelated, collinearity between the institutional indicators should be eliminated. Cluster analysis (*k*-means) was employed on the standardized institutional indicators to group similar countries together while maximizing the between-group differences. In case of missing values, we conducted mean imputation.

The third question asks how the identified country clusters relate to the disadvantage of PwDs in labor market entry trajectories compared to PwoDs. This step is confronted with some challenges: First, the sequence indicators (first transition into employment, turbulence, inclusionary, exclusionary, and maintenance transitions) have different ranges, limiting their comparability. Second, we assume country-level differences for labor market characteristics generally and for the measure of disability. Therefore, we focused on the relative disadvantage of PwDs compared to PwoDs. We normalized and recalculated the sequence indicators as deviation from their respective country mean. For example, if a person with a disability has a certain value for sequence turbulence, the difference to the overall country mean of sequence turbulence is taken for the analysis.

5. Results

5.1. Labor Market Entry Trajectories of PwDs in European Countries

Figure 1 shows the status proportion plots as well as the share of PwDs in each sequence cluster. Cluster 1 ("Early Employment") is characterized by early transitions into full-time employment. Cluster 2 ("Instability") shows combinations of different statuses with a strongly growing proportion of NEET and a small yet, compared to the other types, substantial and growing proportion of the status work disabled. Cluster 3 ("Early Exclusion") shows stable exclusion from the labor market with a large and stable proportion being NEET and a small proportion also being in care work. Cluster 4 ("Employment Bridge") is characterized by a growing proportion moving from education to full-time or part-time work. Cluster 5 ("Late NEET") exhibits status shifts from education to NEET after the second year of the observation period. Cluster 6 ("Long Education") is mostly characterized by education. Finally, Cluster 7 ("Late Employment") is characterized by education and subsequent full-time employment, which, however, comes later compared to Cluster 1.

The average proportion of PwDs in the sample is 15.8%. Compared to this, remarkable differences between PwDs and PwoDs exist in Cluster 2 ("Instability") with a proportion of PwDs of 20.1%, alluding to problematic job search processes. In contrast, the average proportion of PwDs in Cluster 4 ("Employment

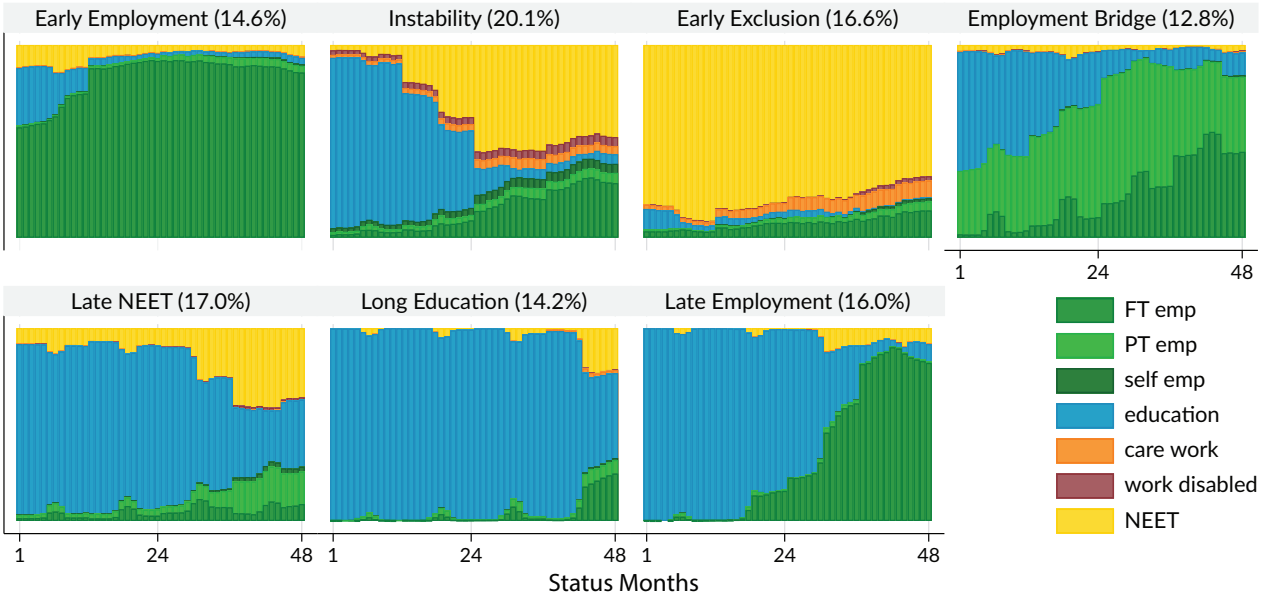


Figure 1. Status proportion plot: activity statuses by month, cluster names (share of PwDs in the cluster in parentheses). Source: Authors' calculations based on Eurostat (2022). Notes: FT = full-time employment; PT = part-time employment; self emp = self-employment.

Bridge") is only 12.8%, potentially pointing to problems of PwDs in following the ideal-typical STWT process of education followed directly by work. The three clusters with the highest share of NEET statuses—"Instability," "Early Exclusion," and "Late NEET"—also show slightly higher shares of PwDs, pointing to more experiences of exclusion during the STWT.

Figure 2 shows the average number of months spent until PwDs and PwoDs enter employment, showing no statistically significant difference between the two groups. Only if we differentiate the type of employment, weakly significant differences between full-time and part-time employment appear. Contrary to H1, PwDs seem to transition to full-time employment a little earlier than PwoDs, whereas the latter transition to part-time employment slightly more quickly (Table 2). Therefore, H1 must be rejected. However, this raises the question of whether this counterintuitive finding is due to PwDs entering specific (segregated) employment programs such as sheltered workshops, where they are employed without facing market competition but might be trapped, posing a barrier to further employment in the regular labor market. This dataset unfortunately does not allow us to distinguish the type of employment and investigate this further.

H2 is related to unstable and exclusionary labor market entry trajectories, which are expected to be more frequent among PwDs. The results in Figure 3 display statistically significant differences between PwDs and PwoDs. PwDs experience exclusionary transitions more often than do PwoDs. The results also show significantly higher turbulence for PwDs, although substantially the differences are small. Based on H3 we expected less inclusionary labor market entry trajectories. Small but statistically significant differences between PwDs and PwoDs regarding this indicator exist.

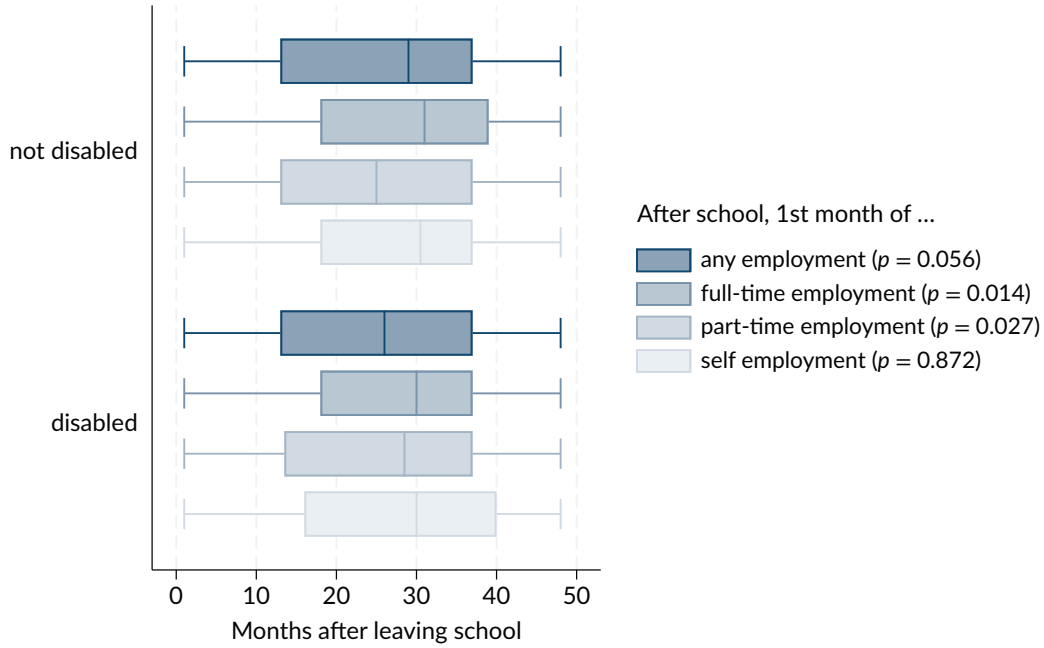


Figure 2. Average number of months until first employment of persons with and without disabilities in European countries. Source: Authors' calculations based on Eurostat (2022). Notes: *p*-value results from *t*-tests between persons with and without disabilities.

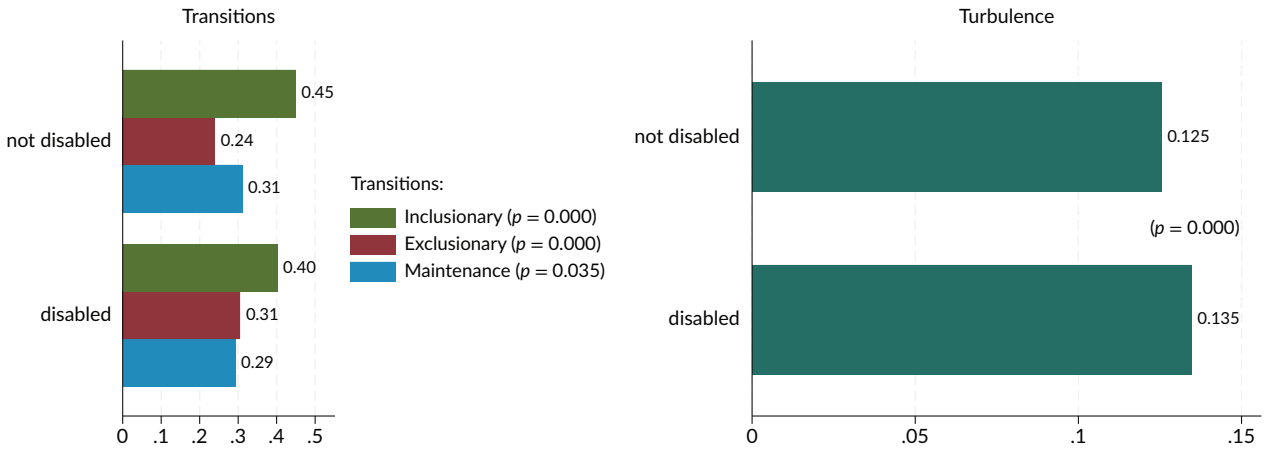


Figure 3. Inclusionary, exclusionary, and maintenance transitions and turbulence during the labor market entry trajectories of persons with and without disabilities in European countries. Source: Authors' calculations based on Eurostat (2022). Notes: *p*-value results from *t*-tests between persons with and without disabilities; the unit of the inclusionary, exclusionary, and maintenance transitions is the share as a fraction of all transitions, i.e., 0.40 means 40%; turbulence is the measure of instability (minimum value of 0 and a maximum value of 1).

Table 2. Overview of corroborated (+) and rejected (–) hypotheses.

H1	PwDs will have slower transitions to employment compared to PwoDs.	–
H2	PwDs will experience exclusionary and unstable labor market entry trajectories more frequently.	+
H3	PwDs will experience inclusionary labor market entry trajectories less frequently.	+

5.2. Clusters of Support Structures for, and Segregation of, PwDs in European Countries

Based on the institutional indicators, four clusters were identified that show differences in the average values of the institutional indicators (Figure 4). Generally, the main categories of support and segregation seem not to be distinctive. Especially the two indicators for segregation seem to be more complementary than consistent.

Cluster 1 ("Reduced Intervention") contains 16 countries with few support structures and low segregation and an average amount of special support for apprenticeships. In Cluster 2 ("Intervention I"), we find the Scandinavian countries and Switzerland. Compared to Cluster 1, the degree of state activity is clearly higher. With respect to segregation and support structures, we find high and low values. The high spending on incapacity and vocational rehabilitation can, however, be interpreted as a focus on compensating labor market disadvantages. Cluster 3 ("Intervention II") is composed of Austria, Germany, France, the Netherlands, and the United Kingdom, where we find the highest amounts of placement and related services and special support for apprenticeship, whereas spending on incapacity and vocational rehabilitation is low. The share of students with SEN in special schools is on an intermediate level. The focus, therefore, seems to be on improving matching processes in the labor market. Finally, the countries of Cluster 4 ("Strong Segregation") have a very high share of students with SEN in special schools, intermediate spending on placement, and the lowest values for incapacity spending, vocational rehabilitation, and special support for apprenticeship. Here improving labor market opportunities PwDs does not seem to be a policy goal.

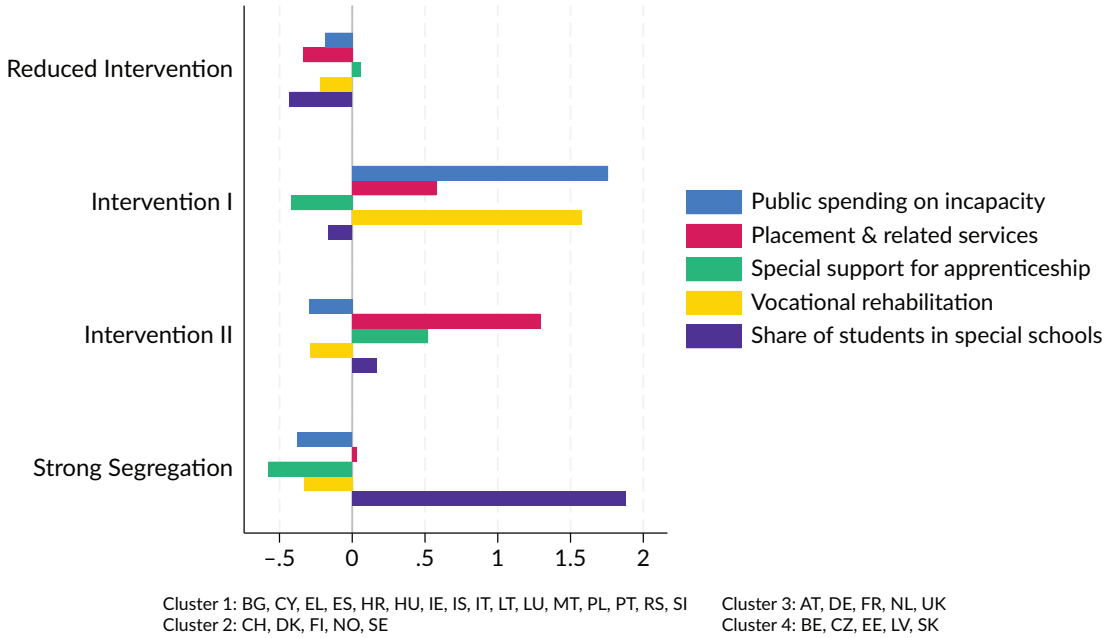
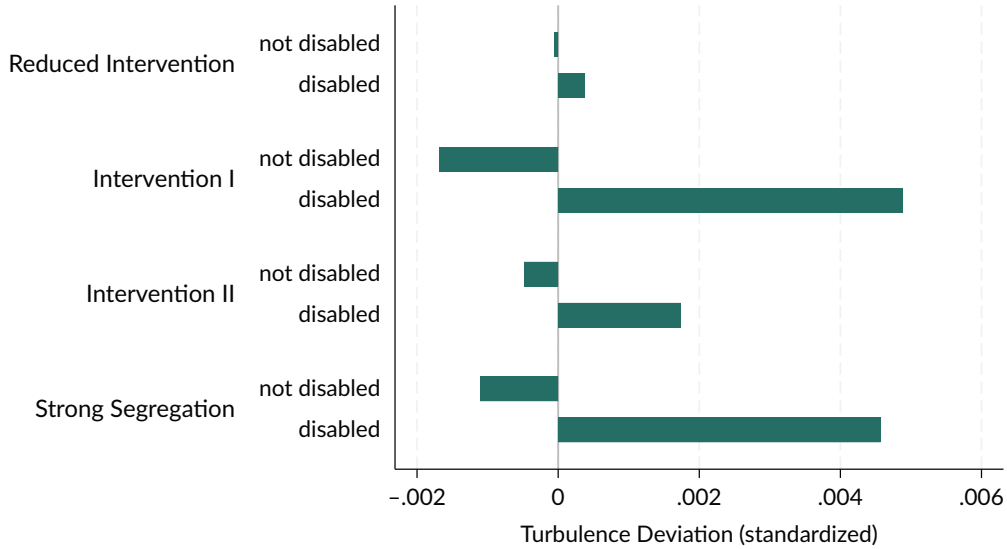


Figure 4. Country clusters based on institutional indicators for support structures for and segregation of PwDs. Source: Authors' calculations based on OECD (2025) and EASNIE (2014, 2016, 2018). Notes: The graph shows the standardized values of the five institutional variables for each of the four country clusters; for country codes see Supplementary File 1, Table A2.

5.3. The Association of Support Structures and Segregation With Labor Market Entry Trajectories of PwDs in European Countries

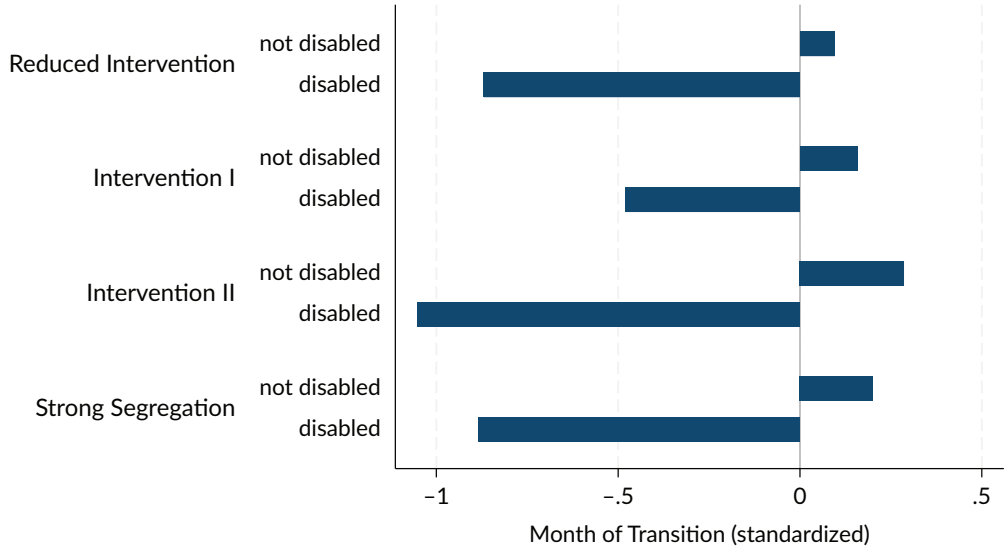
Figure 5 shows the relative differences in the deviation of turbulence from the country mean of PwDs and PwoDs across the country clusters. PwDs are confronted with higher turbulence than PwoDs in all clusters—yet to different extents. The differences in Cluster 1 ("Reduced Intervention") are the smallest, whereas we find the largest differences in Clusters 2 ("Intervention I") and 4 ("Strong Segregation"). These clusters show either high values on the indicator vocational rehabilitation or the share of students in special schools, leading to the conclusion that both kinds of segregation are related to a larger gap between PwDs and PwoDs regarding turbulence.

Analysing how the clusters are related to the speed to first employment underlines the unexpected finding that PwDs seem to experience this transition earlier—across all institutional clusters (Figure 6). Still, the gaps between PwDs and PwoDs vary. A focus on vocational rehabilitation (Intervention I) seems to be related to a smaller gap between PwDs and PwoDs, with PwDs transitioning later into first employment. Reduced intervention seems to lead to earlier transitions, possibly because no safety net exists to compensate for disadvantages or to provide alternatives. Strong segregation may be associated with transitioning or channeling PwDs into specific labor market segments. Compared to these inclusion strategies, matching seems to be the most promising pathway to labor market inclusion. However, the underlying mechanisms of the presented results require further investigation to more fully understand the benefits and risks of specific constellations of policy interventions and programs to facilitate labor market inclusion.



Cluster 1 (Reduced Intervention): BG, CY, EL, ES, HR, HU, IE, IS, IT, LT, LU, MT, PL, PT, RS, SI
Cluster 2 (Intervention I): CH, DK, FI, NO, SE
Cluster 3 (Intervention II): AT, DE, FR, NL, UK
Cluster 4 (Strong Segregation): BE, CZ, EE, LV, SK

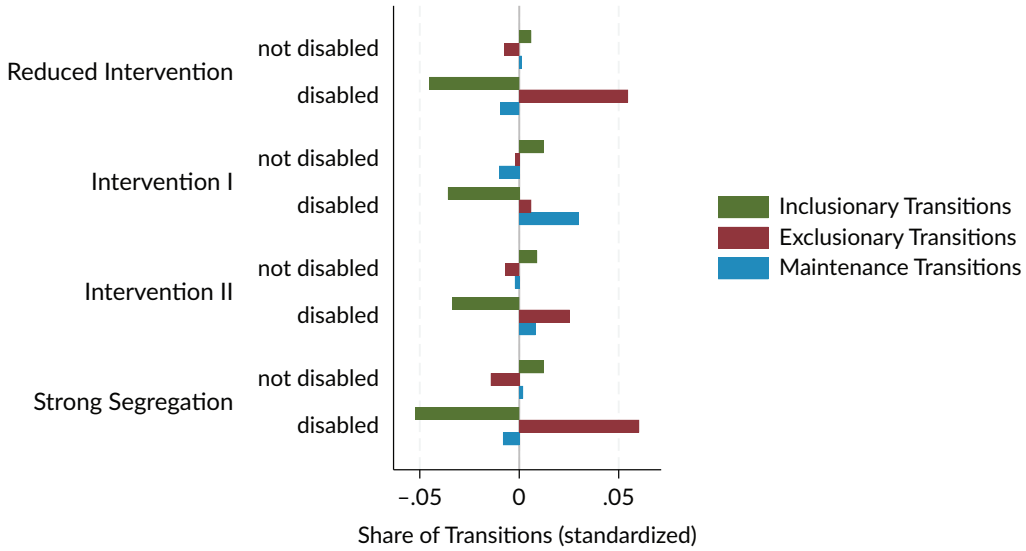
Figure 5. Turbulence deviation of PwDs and PwoDs in different institutional settings. Source: Authors' calculations based on OECD (2025), EASNIE (2014, 2016, 2018), and Eurostat (2022). Notes: The graph shows the deviation of the standardized turbulence measure from its country means for each of the four country clusters, for persons with and without disabilities; for country codes see Supplementary File 1, Table A2.



Cluster 1 (Reduced Intervention): BG, CY, EL, ES, HR, HU, IE, IS, IT, LT, LU, MT, PL, PT, RS, SI
Cluster 2 (Intervention I): CH, DK, FI, NO, SE
Cluster 3 (Intervention II): AT, DE, FR, NL, UK
Cluster 4 (Strong Segregation): BE, CZ, EE, LV, SK

Figure 6. First transition into employment in different institutional settings. Source: Authors' calculations based on OECD (2025), EASNIE (2014, 2016, 2018), and Eurostat (2022). Notes: The graph shows the deviation from the country means of standardized values of the month in which the first transition into employment takes place, for persons with and without disabilities; for country codes see Supplementary File 1, Table A2.

The deviation of inclusionary, exclusionary, and maintenance transitions is very consistent (Figure 7). On average, PwDs have a lower share of inclusionary and a higher share of exclusionary transitions, but—



Cluster 1 (Reduced Intervention): BG, CY, EL, ES, HR, HU, IE, IS, IT, LT, LU, MT, PL, PT, RS, SI
Cluster 2 (Intervention I): CH, DK, FI, NO, SE
Cluster 3 (Intervention II): AT, DE, FR, NL, UK
Cluster 4 (Strong Segregation): BE, CZ, EE, LV, SK

Figure 7. Inclusionary, exclusionary, and maintenance transitions in different institutional settings. Source: Authors' calculations based on OECD (2025), EASNIE (2014, 2016, 2018), and Eurostat (2022). Notes: The graph shows the deviation of the standardized share of inclusionary, maintenance, and exclusionary transitions from the country means in the four country clusters; for country codes see Supplementary File 1, Table A2.

again—the extent of the differences between PwDs and PwoDs varies. The relative disadvantage of PwDs seems to be lowest in countries that belong to Clusters 2 ("Intervention I") and 3 ("Intervention II"), suggesting that both strategies—compensation and labor market matching—help improve the STWT of PwDs.

6. Discussion

In this article, three key research questions were posed addressing STWT processes of PwDs: The first addressed how STWT processes differ across European countries for PwDs and PwoDs. Seven different types of labor market entry trajectories were identified that show notable heterogeneity in the STWT of PwDs across Europe. However, PwDs are slightly more represented in Cluster 2 ("Instability"), composed of many different statuses and transitions between them, and less represented in Cluster 4 ("Employment Bridge"). This cluster contains the largest share of part-time employment, which can be seen as a kind of bridge into full-time employment and the ideal-typical STWT. Looking at specific sequence indicators it also became clear that on average PwDs do not enter the labor market later than PwoDs—contrary to what was expected. Still, they experience more exclusionary and less inclusionary labor market entry trajectories as well as more instability (turbulence) during their STWT.

The second question asked whether specific country clusters can be identified based on indicators related to support structures and segregation of PwDs. Cluster analysis based on indicators provided by the OECD (2025) and the EASNIE (2014, 2016, 2018) for "placement and related services," "special support for apprenticeship," "public spending on incapacity," "vocational rehabilitation" and the national share of students with SEN educated in special schools revealed four different clusters. While Cluster 1 is characterized by low state intervention, Clusters 2 and 3 represent two different approaches to labor market policy interventions—compensation and labor market matching—typical for countries with a strong tradition of state intervention. Cluster 4 represents strong segregation in schooling, which is not designed to facilitate labor market transitions, instead stigmatizing PwDs and leading to continued participation in segregated settings.

Based on this, the third question asked how these country clusters relate to the disadvantage of PwDs compared to PwoDs regarding labor market entry trajectories. Looking at institutional explanations for differences in labor market entry trajectories, the analyses demonstrate that institutional constellations shape the STWT of PwDs and provide particular pathways for inclusion. We find disadvantages for PwDs in all institutional settings, but the extents vary. Regarding turbulence, any kind of segregation seems to be related to a larger gap between PwDs and PwoDs. Turbulence may have positive and negative effects. While it may result in more optimal matching, it may also increase insecurity. A focus on vocational rehabilitation also seems to be related to a smaller gap between PwDs and PwoDs mainly because PwDs transition later into first employment. However, the findings regarding this transition indicator must be further investigated. The disadvantages with respect to inclusionary and exclusionary transitions are largest in institutional systems of reduced intervention (Cluster 1) or where segregated schooling is highly prevalent (Cluster 4) and smaller in those countries where policy interventions (support) are important (Clusters 2 and 3).

The findings are therefore consistent with previous research suggesting that well-resourced systems help alleviate barriers for PwDs by providing necessary accommodations and tailored support during the transition phase (e.g., Halvorsen & Hvinden, 2014; Powell & Pfahl, 2019). Nevertheless, as found in many

areas of education and social policy, the "resource-labelling-dilemma" (Powell, 2016; Stone, 1984) is also relevant to explain STWT of PwDs. Segregated settings are intended to provide additional resources and tailored support. However, the findings underline the double-edged nature of such resources when provided in segregated settings. Strong segregation in the school system is associated with larger gaps between PwDs and PwoDs because of less inclusionary and more exclusionary transitions of PwDs, and systems with strong vocational rehabilitation partly seem to be associated with a smaller gap regarding these indicators between PwDs and PwoDs. However, it seems plausible that this latter finding is also the result of the overall policy orientation regarding compensation in the labor market in these countries.

The study is not without limitations. While EU-SILC longitudinal data is the only internationally comparative dataset allowing comprehensive analysis of labor market entry trajectories of PwDs, it has noteworthy restrictions. First, a more accurate measurement of STWT and particularly labor market entry trajectories of PwDs would require us to distinguish different kinds of status and specifically types of (sheltered or supported) employment, relevant for PwDs (Reims & Schels, 2022). Second, the four-year observation window restricts our ability to capture longer-term labor market trajectories, which are particularly relevant to understand the full impact of institutional factors on PwDs and their life chances. Third, limitations based on the measurement of disability have been discussed in Section 3. Because persons with cognitive impairments are underrepresented in subjective definitions of disabilities, negative associations of disabilities with labor market entry trajectories are potentially underestimated in this study. Additionally, van der Zwan and de Beer (2021, p. 483) point out that people living in collective households and institutions are excluded from EU-SILC, which is particularly relevant in the context of having considerable care needs. Fifth, due to small sample sizes per country, it was not possible to distinguish between PwDs based on the strength of their limitations in activities, although the extent of disability is likely to impact labor market entry trajectories. Information on the type of impairment is also not available in EU-SILC longitudinal data. Fourth, a general concern when investigating associations of disability with employment processes relates to questions of reversed causality, because disability can lead to lower employment chances, while low employment chances can also result in becoming disabled (Parsons & Platt, 2022). This may be particularly important when subjective definitions are applied, because exclusionary transitions may lead to bad health and feeling limited in activities. Unfortunately, we cannot make use of the longitudinal data to check possible reversed causality, because the longest observational period is just four years (48 months), which leads to a hard right censoring, and limitations in activities are only measured on a yearly basis, while we have monthly information on the activity status. Finally, there are restrictions with respect to the institutional indicators used. To measure institutional differences in transition systems of youth with disabilities, we had to rely on rather rough measures, mostly provided by the OECD. The institutional indicators we used are completely quantitative and not well suited to capture effects of institutional configurations or functional equivalents in dozens of country contexts. To adequately measure these crucial institutional features, finer-grained and more specific indicators would be needed. Particularly adequate measures of sheltered employment could potentially further explain differences in labor market entry trajectories. However, to date, no better indicators are available, which also limits provision of robust policy recommendations.

Despite these limitations, our analyses produced new insights into the STWT and specifically labor market entry trajectories of PwDs. Future research should aim to expand the temporal scope of analysis wherever possible—and to explore how transitions evolve beyond the initial STWT phase. Moreover, comparative

longitudinal qualitative studies can provide deeper insights into the lived experiences of individuals as they navigate these pathways and underlying mechanisms, particularly in relation to the resource-labelling-dilemma. More in-depth comparative case studies of countries with varying institutional frameworks and labor market conditions promise to provide further policy lessons to address the challenges faced by PwDs during STWT (on Luxembourg and Switzerland see Powell et al., 2024). The results of this large-*n* study also underscore the need for individual countries to re-evaluate their disability policies, particularly in terms of balancing support with inclusion, as they have committed to doing by ratifying the UN CRPD and setting their sights on reaching the UN Sustainable Development Goals. Thus, policymakers should consider reducing reliance on segregated settings and instead focus on providing targeted, flexible support within regular labor market placements. This may include expanding access to inclusive settings at all stages of the labor market entry trajectory, offering specialized support within regular apprenticeship programs, and enhancing incentives for employers to hire PwDs.

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Conflict of Interests

The authors declare no conflict of interests.

Data availability

This article is based on data from Eurostat: EU Statistics on Income and Living Conditions Microdata 2004–2021, version 1, release 2 (November 30, 2022; https://doi.org/10.2907/EUSILC2004-2021V.1). The responsibility for all conclusions drawn from the data lies entirely with the authors. OECD indicators on labor market programs can be accessed at https://data-explorer.oecd.org.

Supplementary Material

Supplementary material for this article is available online in the format provided by the author (unedited).

References

Aisenbrey, S., & Fasang, A. (2017). The interplay of work and family trajectories over the life course: Germany and the United States in comparison. *American Journal of Sociology*, *122*(5), 1448–1484. https://www.jstor.org/stable/26545922

Allmendinger, J. (1989). Educational systems and labor market outcomes. *European Sociological Review*, *5*(3), 231–250. https://doi.org/10.1146/annurev-soc-081309-150212

Ballo, J. G., & Alecu, A. I. (2023). Predicting stable employment trajectories among young people with disabilities. *Journal of Education and Work*, *36*(6), 408–425. https://doi.org/10.1080/13639080.2023.2254271

Becker, G. (1975). *Human capital: A theoretical and empirical analysis, with special reference to education* (2nd ed.). National Bureau of Economic Research.

Berre, S. (2024). Exploring disability disadvantage in hiring: A factorial survey among Norwegian employers. *Work, Employment and Society*, *38*(4), 1087–1106. https://doi.org/10.1177/09500170231175776

Bjørnshagen, V., & Ugreninov, E. (2021). Disability disadvantage: Experimental evidence of hiring discrimination against wheelchair users. *European Sociological Review*, *37*(5), 818–833. https://doi.org/10.1093/esr/jcab004

Blanck, J. M. (2020). *Übergänge nach der Schule als "zweite Chance"? Eine quantitative und qualitative Analyse der Ausbildungschancen von Schülerinnen und Schülern aus Förderschulen "Lernen."* Beltz Juventa.

Blanck, J. M., Brzinsky-Fay, C., & Powell, J. J. W. (2024). Behinderte Übergänge? Bildung und Behinderung beim Übergang in den Arbeitsmarkt in europäischen Ländern. *Zeitschrift für Inklusion*, *19*(4), 1–25. https://www.inklusion-online.net/index.php/inklusion-online/article/view/803

Bol, T., & van de Werfhorst, H. G. (2013). Educational systems and the trade-off between labor market allocation and equality of educational opportunity. *Comparative Education Review*, *57*(2), 285–308. https://doi.org/10.1086/669122

Breen, R., & Buchmann, M. (2002). Institutional variation and the position of young people: A comparative perspective. *The ANNALS of the American Academy of Political and Social Science*, *580*(1), 288–305. https://doi.org/10.1177/000271620258000112

Brzinsky-Fay, C. (2007). Lost in transition? Labour market entry sequences of school leavers in Europe. *European Sociological Review*, *23*(4), 409–422. https://doi.org/10.1093/esr/jcm011

Brzinsky-Fay, C. (2014). The measurement of school-to-work transitions as processes. *European Societies*, *16*(2), 213–232. https://doi.org/10.1080/14616696.2013.821620

Brzinsky-Fay, C. (2015). Gendered school-to-work transitions? A sequence approach to how women and men enter the labor market in Europe. In H.-P. Blossfeld, J. Skopek, & M. Triventi (Eds.), *Gender, education and employment* (pp. 39–61). Edward Elgar Publishing. https://doi.org/10.4337/9781784715038.00010

Brzinsky-Fay, C. (2017). The interplay of educational and labour market institutions and links to relative youth unemployment. *Journal of European Social Policy*, *27*(4), 346–359. https://doi.org/10.1177/0958928717719198

Brzinsky-Fay, C., & Solga, H. (2016). Compressed, postponed, or disadvantaged? School-to-work transition patterns and early occupational attainment in West Germany. *Research in Social Stratification and Mobility*, *46*, 21–36. https://doi.org/10.1016/j.rssm.2016.01.004

Buchmann, M. C., & Kriesi, I. (2011). Transition to adulthood in Europe. *Annual Review of Sociology*, *37*(1), 481–503. https://doi.org/10.1146/annurev-soc-081309-150212

Bynner, J., & Parsons, S. (2002). Social exclusion and the transition from school to work: The case of young people not in education, employment, or training (NEET). *Journal of Vocational Behavior*, *60*(2), 289–309. https://doi.org/10.1006/jvbe.2001.1868

Cobb, R. B., & Alwell, M. (2009). Transition planning/coordinating interventions for youth with disabilities: A systematic review. *Career Development for Exceptional Individuals*, *32*(2), 70–81. https://doi.org/10.1177/0885728809336655

Coñoman, G. I., Ávila, V., & Carmona, C. (2024). Initiatives to support the school-to-work transition of people with intellectual disabilities: A systematic review. *Journal of Intellectual & Developmental Disability*, *49*(4), 488–500. https://doi.org/10.3109/13668250.2024.2317799

Czedik, S., Pfahl, L., & Traue, B. (2021). (In)capacité au travail? Organisation et fonctionnement des ateliers pour personnes en situation de handicap en Allemagne. *Alter*, *15*(4), 363–374. https://doi.org/10.1016/j.alter.2021.07.002

EADSNE. (2002). *Transition from school to employment. Main problems, issues and options faced by students*

with special educational needs in 16 European countries. https://www.european-agency.org/resources/publications/transition-school-employment-report

EASNIE. (2014). *2014 dataset cross-country report* [Data set]. https://www.european-agency.org/activities/data/cross-country-reports

EASNIE. (2016). *2016 dataset cross-country report* [Data set]. https://www.european-agency.org/activities/data/cross-country-reports

EASNIE. (2018). *2018 dataset cross-country report* [Data set]. https://www.european-agency.org/activities/data/cross-country-reports

Eurostat. (2022). *EU statistics on income and living conditions microdata 2004–2021* (version 1, release 2) [Data set]. https://doi.org/10.2907/EUSILC2004-2021V.1

Gangl, M. (2001). European patterns of labour market entry. A dichotomy of occupationalized vs. non-occupationalized systems? *European Societies*, *3*(4), 471–494. https://doi.org/10.1080/14616690120112226

Gangl, M. (2003). Bildung und Übergangsrisiken beim Einstieg in den Beruf. *Zeitschrift für Erziehungswissenschaft*, *6*(1), 72–89. https://doi.org/10.1007/s11618-003-0005-6

Gutman, L. M., & Schoon, I. (2018). Aiming high, aiming low, not knowing where to go: Career aspirations and later outcomes of adolescents with special educational needs. *International Journal of Educational Research*, *89*, 92–102. https://doi.org/10.1016/j.ijer.2017.10.002

Hadjar, A., & Kotitschke, E. (2022). How the welfare-state regime shapes the gap in subjective well-being between people with and without disabilities. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, *73*(4), 501–525. https://doi.org/10.1007/s11577-021-00805-4

Halvorsen, R., & Hvinden, B. (2014). Nordic reforms to improve the labour market participation of vulnerable youth. *International Social Security Review*, *67*(2), 29–47. https://doi.org/10.1111/issr.12037

Halvorsen, R., Hvinden, B., & Schoyen, M. A. (2016). The Nordic welfare model in the twenty-first century. *Social Policy and Society*, *15*(1), 57–73. https://doi.org/10.1017/S1474746415000135

Holtmann, A. C., Ehlert, M., Menze, L., & Solga, H. (2020). Improving formal qualifications or firm linkages—What supports successful school-to-work transitions among low-achieving school leavers in Germany? *European Sociological Review*, *37*(2), 218–237. https://doi.org/10.1093/esr/jcaa047

Iannelli, C., & Smyth, E. (2008). Mapping gender and social background differences in education and youth transitions across Europe. *Journal of Youth Studies*, *11*(2), 213–232. https://doi.org/10.1080/13676260701863421

Janus, A. L. (2009). Disability and the transition to adulthood. *Social Forces*, *88*(1), 99–120. https://doi.org/10.1353/sof.0.0248

Kangas, O., & Karonen, E. (2022). Sustainable and inclusive welfare states: Employment and poverty among immigrants and people with disabilities in different welfare state regimes. *Sozialpolitik.ch*, *2022*(1). https://doi.org/10.18753/2297-8224-187

Lee, S. E. (2014). *Protective, active and legislative disability policy in 10 OECD countries through the lens of fuzzy ideal type analysis (FSITA)* [Unpublished MPhil thesis]. University of York. https://etheses.whiterose.ac.uk/id/eprint/8621

Link, B. G., & Phelan, J. C. (2001). Conceptualizing stigma. *Annual Review of Sociology*, *27*(1), 363–385. https://doi.org/10.1146/annurev.soc.27.1.363

Lorentzen, T., Bäckman, O., Ilmakunnas, I., & Kauppinen, T. (2019). Pathways to adulthood: Sequences in the school-to-work transition in Finland, Norway and Sweden. *Social Indicators Research*, *141*(3), 1285–1305. https://doi.org/10.1007/s11205-018-1877-4

Malo, M. A., & Rodríguez, V. (2022). *Sheltered employment for people with disabilities: An international appraisal with illustrations from the Spanish case* [MPRA Paper 111861]. University Library of Munich. http://digital.casalini.it/5342925

Marczuk, A. (2024). Literature review of comparative school-to-work research: How institutional settings shape individual labour market outcomes. *Journal for Labour Market Research*, *58*(1), Article 19. https://doi.org/10.1186/s12651-024-00375-w

Maurice, M., Sellier, F., & Silvestre, J.-J. (1986). *The social foundations of industrial power: A comparison of France and Germany*. MIT Press.

Mazzotti, V. L., Rowe, D. A., Kwiatek, S., Voggt, A., Chang, W.-H., Fowler, C. H., Poppen, M., Sinclair, J., & Test, D. W. (2021). Secondary transition predictors of postschool success: An update to the research base. *Career Development and Transition for Exceptional Individuals*, *44*(1), 47–64. https://doi.org/10.1177/2165143420959793

McVicar, D., & Anyadike-Danes, M. (2002). Predicting successful and unsuccessful transitions from school to work by using sequence methods. *Journal of the Royal Statistical Society Series A: Statistics in Society*, *165*(2), 317–334. https://doi.org/10.1111/1467-985x.00641

Menze, L., Solga, H., & Pollak, R. (2023). Long-term scarring from institutional labelling: The risk of NEET of students from schools for learning disability in Germany. *Acta Sociologica*, *66*(3), 289–306. https://doi.org/10.1177/00016993221114257

Molden, T. H., & Tøssebro, J. (2012). Disability measurements: Impact on research results. *Scandinavian Journal of Disability Research*, *14*(4), 340–357. https://doi.org/10.1080/15017419.2011.621654

Müller, W., & Shavit, Y. (1998). The institutional embeddedness of the stratification process: A comparative study of qualifications and occupations in thirteen countries. In Y. Shavit & W. Müller (Eds.), *From school to work: A comparative study of educational qualifications and occupational destinations* (pp. 1–48). Clarendon Press.

Myklebust, J. O., & Båtevik, F. O. (2009). Earning a living for former students with special educational needs. Does class placement matter? *European Journal of Special Needs Education*, *24*(2), 203–212. https://doi.org/10.1080/08856250902793677

Myklebust, J. O., & Båtevik, F. O. (2022). Special needs provision and economic independence among young adults with disabilities: A longitudinal study. *European Journal of Special Needs Education*, *37*(5), 715–728. https://doi.org/10.1080/08856257.2021.1974552

Newman, L., Wagner, M., Knokey, A.-M., Marder, C., Nagle, K., Shaver, D., & Wei, X. (2011). *The post-high school outcomes of young adults with disabilities up to 8 years after high school: A report from the National Longitudinal Transition Study-2 (NLTS2)*. National Center for Special Education Research.

OECD. (2010). *Sickness, disability and work: Breaking the barriers—A synthesis of findings across OECD countries*. https://doi.org/10.1787/9789264088856-en

OECD. (2022a). *Coverage and classification of OECD data for public expenditure and participants in labour market programmes*. https://web-archive.oecd.org/2022-09-16/120573-Coverage-and-classification-of-OECD-data.pdf

OECD. (2022b). *Disability, work and inclusion: Mainstreaming in all policies and practices*. https://doi.org/10.1787/1eaa5e9c-en

OECD. (2024). *Public spending on incapacity*. https://doi.org/10.1787/f35b71ed-en

OECD. (2025). *OECD data explorer*. https://data-explorer.oecd.org

Østerud, K. L. (2023). Disability discrimination: Employer considerations of disabled jobseekers in light of the ideal worker. *Work, Employment and Society*, *37*(3), 740–756. https://doi.org/10.1177/09500170211041303

Parsons, S., & Platt, L. (2022). *Special educational needs and disability: A lifetime of disadvantage in the labour market?* (Working Paper 2022/4). UCL Centre for Longitudinal Studies.

Pfahl, L. (2011). *Techniken der Behinderung*. transcript. https://doi.org/10.1515/transcript.9783839415320

Phelps, E. S. (1972). The statistical theory of racism and sexism. *American Economic Review*, *62*(4), 659–661. http://www.jstor.org/stable/1806107

Powell, J. J. W. (2016). *Barriers to inclusion: Special Education in the United States and Germany*. Routledge.

Powell, J. J. W., & Blanck, J. M. (2023). The nexus of dis/ability, education and social inequality: Vocational training and higher education in Germany. *Sozialpolitik.ch*, *2023*(1). www.sozialpolitik.ch/issue/view/441

Powell, J. J. W., Hadjar, A., Samuel, R., Traue, B., & Zurbriggen, C. (2024). Advancing inclusion or persistent disablement in school-to-work transitions? Comparing education, training, and employment institutions in Luxembourg and Switzerland. *Sozialpolitik.ch*, *2024*(2). https://doi.org/10.18753/2297-8224-5884

Powell, J. J. W., & Pfahl, L. (2019). Disability and inequality in educational opportunities from a life course perspective. In R. Becker (Ed.), *Research handbook on the sociology of education* (pp. 383–406). Edward Elgar. https://doi.org/10.4337/9781788110426

Quintini, G., & Manfredi, T. (2009). Going separate ways? School-to-work transitions in the United States and Europe. *OECD Social, Employment and Migration Working Papers*, *90*. https://doi.org/10.1787/221717700447

Reims, N., & Schels, B. (2022). Typical school-to-work transitions of young adults with disabilities in Germany: A cohort study of recipients of vocational rehabilitation services after leaving school in 2008. *Disability and Rehabilitation*, *44*(20), 5834–5846. https://doi.org/10.1080/09638288.2021.1948115

Richardson, J. G., & Powell, J. J. W. (2011). *Comparing special education: Origins to contemporary paradoxes*. Stanford University Press.

Rigg, J. (2005). *Labour market disadvantage amongst disabled people: A longitudinal perspective* (LSE STICERD Research Paper No. CASE103). LSE. https://ssrn.com/abstract=1159334

Ritschard, G. (2023). Measuring the nature of individual sequences. *Sociological Methods & Research*, *52*(4), 2016–2049. https://doi.org/10.1177/00491241211036156

Rivera, L. A., & Tilcsik, A. (2023). Not in my schoolyard: Disability discrimination in educational access. *American Sociological Review*, *88*(2), 284–321. https://doi.org/10.1177/00031224221150433

Rocca, A., Neagu, G., & Tosun, J. (2022). School-work-transition of NEETS: A comparative analysis of European countries. *Youth & Society*, *54*(Suppl. 2), 130S–152S. https://doi.org/10.1177/0044118x211051761

Rojewski, J. W., Lee, I. H., & Gregg, N. (2015). Causal effects of inclusion on postsecondary education outcomes of individuals with high-incidence disabilities. *Journal of Disability Policy Studies*, *25*(4), 210–219. https://doi.org/10.1177/1044207313505648

Sackmann, R., & Wingens, M. (2003). From transitions to trajectories: Sequence types. In W. R. Heinz & V. W. Marshall (Eds.), *Social dynamics of the life course: Transitions, institutions, and interrelations* (pp. 93–115). de Gruyter.

Scherer, S. (2001). Early career patterns: A comparison of Great Britain and West Germany. *European Sociological Review*, *17*(2), 119–144. https://doi.org/10.1093/esr/17.2.119

Scherer, S. (2005). Patterns of labour market entry: Long wait or career instability? An empirical comparison of Italy, Great Britain, and West Germany. *European Sociological Review*, *21*(5), 427–440. https://doi.org/10.1093/esr/jci029

Schmid, G. (2017). Transitional labour markets: Theoretical foundations and policy strategies. In *The new Palgrave dictionary of economics* (pp. 1–15). Palgrave Macmillan. https://doi.org/10.1057/978-1-349-95121-5_3050-2

Solga, H., Protsch, P., Ebner, C., & Brzinsky-Fay, C. (2014). *The German vocational education and training system: Its institutional configuration, strengths, and challenges* (Discussion Paper No. SP I 2014–502). WZB. https://hdl.handle.net/10419/104536

Stiglitz, J. E. (1975). The theory of "screening," education, and the distribution of income. *American Economic Review*, *65*(3), 283–300. http://www.jstor.org/stable/1804834

Stone, D. A. (1984). *The disabled state*. Temple University Press.

Thurow, L. C. (1975). *Generating inequality*. Basic Books.

Tschanz, C., & Powell, J. J. W. (2020). Competing institutional logics and paradoxical universalism: School-to-work transitions of disabled youth in Switzerland and the United States. *Social Inclusion*, *8*(1), 155–167. https://doi.org/10.17645/si.v8i1.2373

Tschanz, C., & Staub, I. (2017). Disability-policy models in European welfare regimes: Comparing the distribution of social protection, labour-market integration and civil rights. *Disability & Society*, *32*(8), 1199–1215. https://doi.org/10.1080/09687599.2017.1344826

United Nations. (2006). *Convention on the rights of persons with disabilities*. https://www.ohchr.org/en/hrbodies/crpd/pages/conventionrightspersonswithdisabilities.aspx

van der Zwan, R., & de Beer, P. (2021). The disability employment gap in European countries: What is the role of labour market policy? *Journal of European Social Policy*, *31*(4), 473–486. https://doi.org/10.1177/09589287211002435

Walther, A. (2006). Regimes of youth transitions: Choice, flexibility and security in young people's experiences across different European contexts. *YOUNG*, *14*(2), 119–139. https://doi.org/10.1177/1103308806062737

Wells, T., Hogan, D. P., & Sandefur, G. D. (2003). What happens after the high school years among young persons with disabilities? *Social Forces*, *82*(2), 803–832. https://doi.org/10.1353/sof.2004.0029

WHO. (2001). *International classification of functioning, disability and health (ICF)*.

Wolbers, M. H. J. (2007). Patterns of labour market entry: A comparative perspective on school-to-work transitions in 11 European countries. *Acta Sociologica*, *50*(3), 189–210. https://doi.org/10.1177/0001699307080924

Yates, S., & Roulstone, A. (2013). Social policy and transitions to training and work for disabled young people in the United Kingdom: Neo-liberalism for better and for worse? *Disability & Society*, *28*(4), 456–470. https://doi.org/10.1080/09687599.2012.717874

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